

The Influence of Water Vapor on the Rate of
Reduction of Magnetite and Hematite by Carbon
Monoxide, by Ye. P. Tatiyevskaya, 10 pp.

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pp 349-356.

SLA 59-15408

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I. N. Kozlov, A. P. Puzanov, et al.
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pp 374-379.

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Solubility of Carbon Dioxide From its Mixtures
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SLA/R-2446

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Solubility of Ethylene and Propylene in liquid N₂
and liquid O₂

by N. M. Tsin.

OSTS 61-17136

AEC Trans (avail. Brookhaven)

Zh Fiz Khim Vol 14, page 22-6 (1940)

Solubility of Acetylene and CO_2 in Liquid N_2 and

Liquid O_2 by M. F. Fedorova

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Solubility of Gases in Liquids at Low Temperatures
and High Pressures. III. Solubility of Hydrogen in
Liquid Methane, by V. G. Pastovskiy, M. G.
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RT - 2668

Scientific - Chemistry
Doc 55 C/S/DEX

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Vibration Spectra of Hydrocarbon Molecules, I.
Methods for the Study of Valence Vibrations, by
M. A. El'yashevich, 20 pp.

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Sci Trans Center RT-405

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Sci Trans Center RT-409

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JPRS 7159

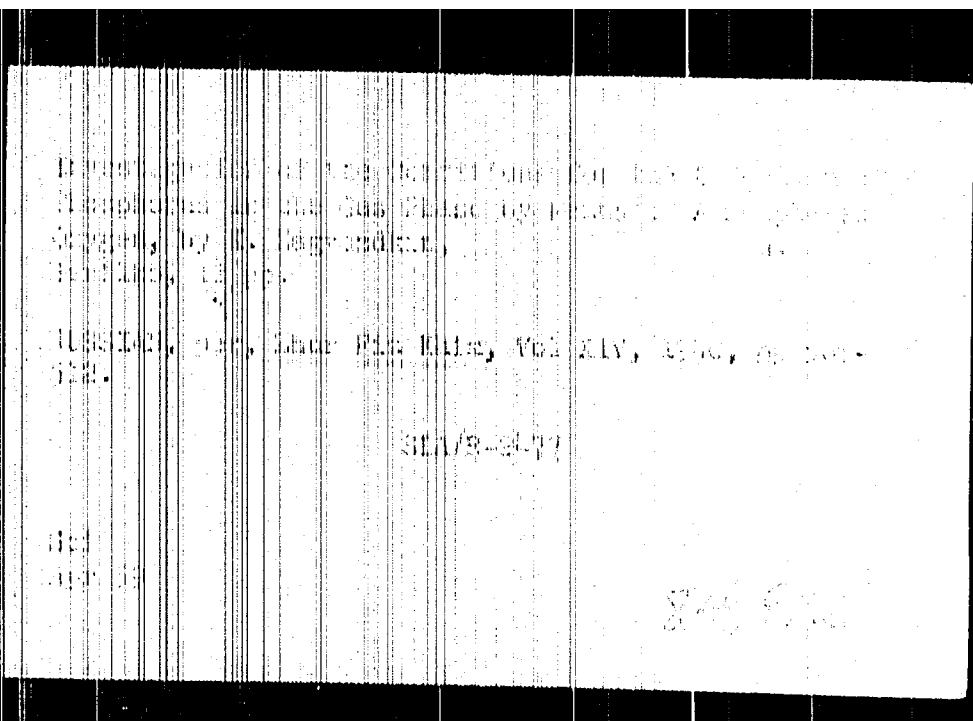
OTC 77-62-20777

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Thermodynamic Constants of ~~Si~~ Silicon Tetrafluoride.
The Hydrolysis & Equilibrium of Silicon Tetra-
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SLA R-2939

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SLA 59-10285

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Oxidation of Adsorbed Molecules of Carbon
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Pevlyuchenko,

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Theory of Formation of Catalytically Active Assemblies
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Research - Physics

Measurement of Small Vapor Pressures. I. Vapor
Pressure of Naphthalene, Camphor and Glycerol, by
A. A. Zil'berman-Granovskaya,

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pp 759-767.

ATS RJ-2186

Sci - Chem

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The Preparation of Sulfur Monoxide Photochemically,
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JPRS 7531

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Effect of Catalytic Additives Upon the Fission
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A Study of the Adsorption of Organic Vapors on an
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Sci - Phys, Chem
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The Mechanism of the Functioning of the Nickel Oxide
Electrode, by B. V. Ershler, G. S. Tyurikov, and
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pp 985-988.

SIA Tr R-1019

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Measurement of Small Vapor Pressures. III.
Measurement of the Vapor Pressures of Halogen-
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AMS RJ-2183

Sci - Chem

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Composition of Nitroalcohol, by A. I. Molotov, 30 pp.
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Theory of Thermal Explosions III. Thermal
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JPRS 7160

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Photoelectrochemical Processes on Iron in
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ATS R7-1151

Sci - Phys, Chem

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Surface Tension in Binary and Tertiary Mixtures of
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SLA R-2801

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Jul 59

92,408

Temkin, M. I.
KINETICS OF HETEROGENEOUS CATALYTIC PROC-
ESSES. [1961] 7p

Order from OTS in SLA \$1.10

61-18110

Trans. of Zhurnal Fizicheskoi Khimii (USSR) 1940,
v. 14, no. 9/10, p. 1153-1158.

DESCRIPTORS: *Catalysis, Analysis, *Reaction
kinetics, Chemical reactions, *Adsorption.

The Langmuir theory of kinetics of chemical reactions
is insufficient for explanations of all facts encountered
in catalysis. A discussion of research at the Karpov
Institute cited an explanation for the adsorption iso-
therm and its experimental support for specified cases.
(Author)

(Chemistry-Physical TT, v. 6, no. 8)

61-18110

1. Title: Langmuir theory
1. Temkin, M. I.

5135

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Para-Ortho Conversion of Hydrogen and the Exchange
Reaction Between Light and Heavy Hydrogen on Charcoal,
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Sci - Chemistry

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Kinetics of Ammonia Synthesis, by V. A. Roiter, 15 pp.

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SLA R-2961

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Mechanism of the Catalytic Synthesis of Ammonia, by
P. V. Usat'ev, 5 pp.

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1246-1249

SLA R-2950

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Effect of Potassium on the Rate of Hydrogenation of
Adsorbed Nitrogen, by K. Y. Korshakov, M. Y.
Kagan, 13 p.

RUSSIAN, in: Zhur Fiz Khim Vol XIV, 1940,
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SLA R-2575

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Analysis of the Process of Reduction of Ammonia
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pp1260-1270.

SLA R- 2966

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The Formation of Catalysts for Destructive
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JPRS 7527

Sci - Chem

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(NY-4844)

The Catalytic Hydrogenation and Polymerization of
Acetylene-Hydrogen Mixtures. The Synthesis of
Isobutylene From Acetylene and Hydrogen, by A. D.
Petrov, I. M. Antonov, 8 pp.

RUSSIAN, Izv. Akad. Nauk SSSR, Vol XIV, No 9/10,
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JPRS 7528

Sci - Chem

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Low-Temperature Oxidation of Nitric Oxide, by L. S.
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1347-1358

SLA R-2966

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Optical Studies of Activated Absorption,
by A. N. Turemin, 15 pp.

RUSSIAN, ~~Engl~~ Engl ~~Phys~~ Phys, Vol XIV, 1940,
pp 1368-1369. 9066970

ABC Tr-3227

Sci - Phys
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Vibration Spectra of Hydrocarbon Molecules, IV. A
General Method of Constructing Equations for
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Sci Trans Center RT-410

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Solubility of Lithium in Its Fluoride Chloride
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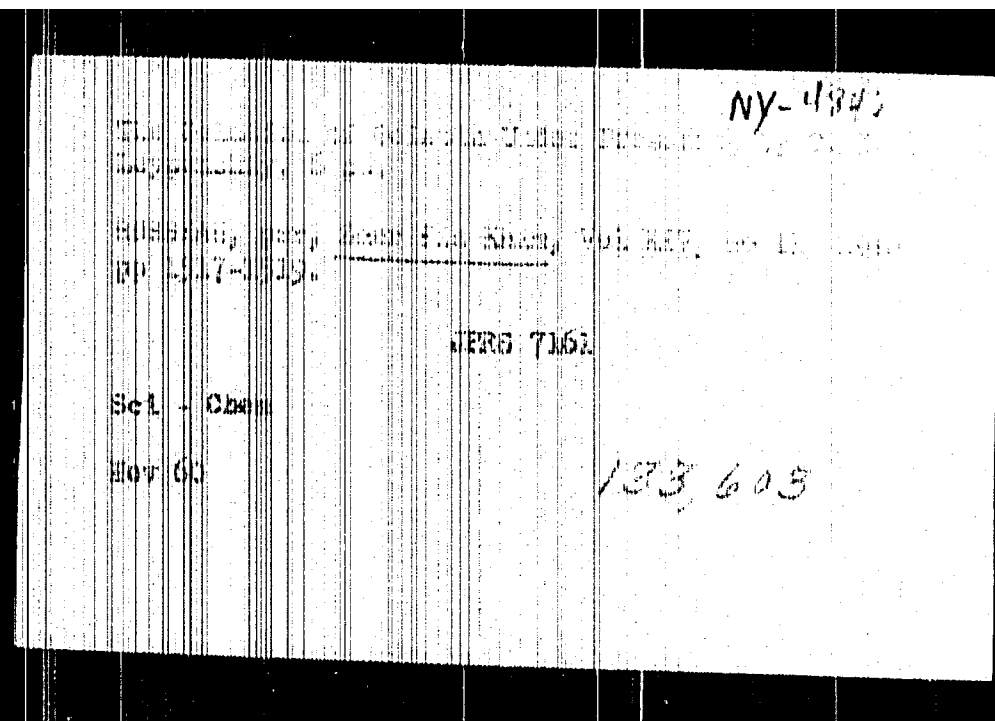
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On Sulfur Monoxide, by E. Kondrat'eva, V.
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JPRS 7529

Doc - Chem

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Exchange Reaction Between Hydrogen and Deuterium
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MIH 8-7-61.

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Sci - Med

Active Contacts, Their Formation and Nature, by S. Z.
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RUSSIAN, per, Zhur Fiz Khim, Vol IV, 1941, pp 1-30.

SLA R-2052

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The Problem of the Absolute Velocity of Heterogeneous
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RUSSIAN, per, Zhur Fiz. Khim, Vol XV, 1941, pp
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SLA R-2547

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Vibration Spectra of Hydrocarbon Molecules. V.
Calculation of Frequencies of the Valence
Oscillations of Carbon Chains of the Olefin
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The Operation of Hlovers in the Chemical Works of
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SLA 60-17722

Sci

Apr 62

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Vol IV, No 6

X-Ray and Electronographic Investigation of
the Products of Iron Corrosion, by N. A.
Shishakov, P. S. Moiseev

RUSSIAN, per, Zhur Fiz Khim, Vol XV, 1941,
pp 101-103.

AEC T: 1155

Scientific - Chemistry

Shishakov, N.A. and Moiseev, P.S.
ONDERZOEK VAN DE CORROSIEPRODUCTEN VAN
IJZER MET RONTGEN- EN ELECTRONENDIFRAC-
TIE (Electron diffraction and x-ray investigation of
of the products formed in the corrosion of Fe). 14 p.
25 refs. NTWL: 455 (Text in Dutch).
Order from DTS or ETC \$1.85.

61-17044

Trans. of Zhurnal Fizicheskoi Khimii (Ussr) 1941
v. 15, p. 101-108.

DESCRIPTORS: *Electron diffraction analysis,
*X-ray diffraction analysis, *Iron alloys, Corrosion.

61-17044

- I. Shishakov, N.A.
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Photoelectric Processes on a Silver Electrode,
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pp 115-135. ~~RUSSIAN~~ 9093971

AKC Tr-5231

Sci. - Phys., Chem
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Mechanism of the Catalytic Oxidation of Ammonia,
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RUSSIAN. Izv. Akad. Nauk SSSR, Ser. Khim., Vol XV, 1961, pp
164-173

SLA R-2951

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Heterogeneous Equilibria in the Ammonia-Nitrogen
System at High Pressures, by I. R. Krichevskiy,
P. E. Dolzhnev, 10 pp.

RUSSIAN, Izv. Akad. Nauk SSSR, Ser. Fiz. Khim., Vol. IV, No. 2, 1941,
pp 184-192.

SLA R-2950

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92,411

Compressibility of Gaseous Mixtures II. P-V-T
Data for Binary and Tertiary Mixtures of Methane,
Nitrogen and Hydrogen (I), by ~~and~~ I. R.
Krichevskiy, G. T. Levchenko, 6 pp.

RUSSIAN, per, Zhur Fiz. Khim, Vol XV, ^{No 2} 1941, pp
193-197.

SLA R-2948

Sci

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The Decomposition Potentials at Various
Current Densities in the Systems $\text{AsBr}_3\text{-C}_2\text{H}_5$
 $\text{O-C}_2\text{H}_5$ and $\text{SbCl}_3\text{-C}_2\text{H}_5$, $\text{O-C}_2\text{H}_5$, by O. K.
Kuzin, G. B. Kleibin.

RUSSIAN, per, Zhur Fiz Khim, Vol XV, No 2, 1941,
pp 228-233.

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T-1386 (D.S.I. 4)

Sci - Chemistry

May 1956

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SLA 57-175-4

Pahezhetski, S. Ya. and Gladyshev, A. T.
KINETICS OF CATALYTIC DIMERIZATION OF
ETHYLENE. [1961] 14p. 18 refs.
Order form OTS or SLA \$1.60

61-18012

Trava. et Zhurnal Fizicheskoi Khimii (USSR) 1961,
v. 35, pp. 133-141

DESCRIPTORS: Ethylene. Polymerization. Chemical
reactions. Nickel catalyst.

The kinetics of dimerization of ethylene on a nickel
catalyst was determined, and it was established that
the velocity of dimerization is proportional to the
pressure of ethylene in the gaseous phase to the first
degree. The apparent energy of activation of the reac-
tion is about 10,500 cal. The results obtained were
interpreted with the aid of the regularities character-
istic for the kinetics of reactions occurring on non-
uniform surfaces. (author)

(Chemistry--Organic, TT, v. 6, no. 7)

61-18012

I. Pahezhetski, S. Ya.
II. Gladyshev, A. T.

Office of Technical Services

Polyskov, M. V. and Kuleshina, L. P.
MECHANISM OF IGNITION OF GASEOUS MIXTURES.
[1961] pp.

Order from OTC or SLA \$1.10

61-18009

Trans. of Zhurnal Fizicheskoi Khimii (USSR) 1941.
v. 15, p. 470-474

DESCRIPTORS: Gases, Ignition, Nitrogen, Oxygen,
Methane.

The formula of Semenov concerning the lower limit of
explosion ignition with the diameter of the reaction
vessel for combustible mixtures diluted with inert
gases is applicable to their ignition by a heated wire.
The dependence of the lower limit upon the diameter
and, consequently, the applicability of the Semenov
formula is due to the induction period during which
initial explosion centers accumulate up to a limit
required for the explosion. The induction period and,
consequently, the velocity of accumulation of the crit-
(Chemistry: Physical, T.T. v. 6, no. 2) (over)

61-18009

I. Polyskov, M. V.
II. Kuleshina, L. P.

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Electromagnetic Waves in a Hollow Conductor with
Variable Cross-Section, by N. N. Malov, 12 p.

RUSSIAN, per, Jour Phys, 1941, Vol IV, No 5,
pp 473-478.

SLA 59-15210

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Vol 2, No 11

109,660

S-178/60

(NY-4829)

Behavior of Thixotropic Colloids Under Pressure
Congealing of Ferric Hydroxide, by O. I.
Laypinskiy, P. A. Frank, 6 pp.

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pp 504-506.

JPRS 5736

Sci - Chem

Oct 60

128,418

The Solubility of Solid Methane in Liquid
Nitrogen and Oxygen, by V. G. Fastovskiy,
Yu. A. Prestinskiy, 13 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XV,
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SLA 60-238516

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1962, 660

Influence of Temperature on the Detonation Limits
of Hydrogen-Air Mixtures, by N. A. Rivin.
UNCLASSIFIED

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pp 533-550.

ATIC F-TS-8313

Scientific - Physics
ATT 83148

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Electron Diffraction Study of the Structure of
Cadmium Iodide, by Z. G. Punnsker, 34 pp.
RUSSIAN, Tr. Zh. Fiz. Khim., Vol 15, No 5, 1941,
pp 559-576.
AEC/ANL-Tr-794-70

Sci/Phy
Mar 70

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The absorption spectra of vapors of compounds
formed by uranium and chlorine.
by Yu. M. Tolmachev.

AEC Trans (avail. Brookhaven)

Kravchenko, V. M.
THERMODYNAMIC CALCULATION OF QUATERNARY SYSTEMS: SYSTEM ORTHOXYLENE-METAXYLENE-PARAXYLENE-ETHYLBENZENE.
[1962] 8p. 21 refs.

Order from ODS or SLA \$1.10

62-14614

Trans. of Zhurnal Fizicheskoi Khimii (USSR) 34, v. 13, p. 652-658

DESCRIPTORS: *Xylenes, *Benzenes, *Ethyl radicals, *Thermodynamics, *Thermochemistry, Solubility, *Equilibria, *Crystallization, Phase studies, Chemical equilibrium

The method previously suggested for solving several equations for isobars of solubility to determine the coordinates of eutectic points in ternary systems was extended to quaternary systems and as an example a diagram of the quaternary system orthoxylene-meta-xylene-paraxylene-ethylbenzene was calculated and (Chemistry-Physical, TT, v. 8, no. 6) (over)

62-14614

I. Kravchenko, V. M.
II. Title: System...

Office of Technical Services

Theory of Preparation of Catalysts. The Role
of the Free Energy of the Processes of Preparation,
by S. Z. Roginskiy, 27 p.

RUSSIAN, or Zhur Fiz. Khim. Vol XV, 1941, pp
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SLA R-2941

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S-178/60

(NY-4829)

Thermal Decomposition and Oxidation of Sulfur
Monoxide, by Ye. Kondrat'yeva, V. Kondrat'yev,
17 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XV, No 6, 1941,
pp 731-738.

JPRS 5737

Sci - Chem
Oct 60

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Polarization During Ion Redox Processes
Rechargeings, Ions of Iron, Thallium,
Cerium, And Vanadium, by L. Antropov,
E. Eksireva.
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1941, PP 776-792. 9230478
AEC-71-6572

Sci-Phys
Dec 65

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Vibration Spectra of Hydrocarbon Molecules.
I. Relation Between Vibration Form and Symmetry of
Molecules, by M. A. El'yashovich, 19 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XV, No 7-8, 1941,
pp 831-846,

Sci Tr Center RT-1140

Scientific - Physics

Jul 54 (78)

16,062

Vibration Spectra of Hydrocarbon Molecules. VII. A
Simplified Method of Setting up Equations for the Deter-
mination of Vibration Frequencies of Polyatomic Molecules,
by M. A. El'yashovich, 23 pp.

RUSSIAN, per, Zhur Fiz Khim, Vol XV, No 7-8, 1941,
pp 847-861.

Sci Tr Center RF-1141

Scientific - Physics

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Jul 54 CTS

Vibration Spectra of Hydrocarbon Molecules. VIII.
Calculation of Constants of the Potential Energy
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Ethane. B. I. Stepanov, 21 pp.

Russk. Fiz. Khim. Vol. IV, no 7-8, 1941,
pp 865-885.

Sci. Tr. Center RT-1221

Scientific - Physics

Jul 54 CR 16,059

Chemical Bond in Solid Compounds, by A. K.
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RUSSIAN, per, Zhur Fiz i Khim, Vol. XV, 1941, pp.
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SLA R-2967

Sci

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92,398

The Nature of Photochemical and Additive
Coloring of Fluorite, by L. N. Shemovskiy,
18 pp.

RUSSIAN, Zhur. Fiz. Khim., Vol XV, No 7-8,
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Sci Tr Center
ET-1443

Scientific - Chemistry

18,878

Diffraction of Rapid Electrons in Thin Films
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